



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,074	02/08/2002	Gino Pavlovic	BP-65	3459

7590

06/04/2003

Friedrich Kueffner  
Suite 1921  
342 Madison Avenue  
New York, NY 10173

EXAMINER

DABNEY, PHYLESHA LARVINIA

ART UNIT

PAPER NUMBER

2643

DATE MAILED: 06/04/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/071,074

Applicant(s)

PAVLOVIC ET AL.

Examiner

Phylesha L Dabney

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on 08 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

This action is in response to the application filed 8 February 2002 in which claims 1-11 are pending.

The examiner requests that the applicant submit a copy of the reference number (AT 400 910 B) that was cited on page 15 of the specification.

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "sound receiver" must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

2. Figures 1-3 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Submitted  
proposed  
drawing corr  
page # 6

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In multiple instances throughout the claims, the terms magnetostrictive and electrostrictive is used. Magnetostrictive and electrostrictive transducers operate differently; therefore, it appears that the claims are improper because there scope cannot be ascertained.

4. It is not clear whether the sound receiver of claim 6 is a different component or whether it is the vibrating means. The examiner has assumed that it is the vibrating means since no other element is depicted for the wording in the drawings.

Appropriate correction is required.

ok  
sound receiver (35)  
vibe means (11)

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 3, and 5-6 are rejected under 35 U.S.C. 102(b) as being anticipated by Bernstein (U.S. Patent No. 5,146,435).

Regarding claim 1, as best understood, Bernstein discloses an electroacoustic transducer (figures 1-13) for an electroacoustic device, comprising: electrostrictive elements (12, 14, 16, 24, 26, 36; in their multiple representation shown in multiple embodiments; capacitive material; col. 3 lines 42-58) configured to be connected to a controllable power supply, wherein the

Art Unit: 2643

dimensional changes of the electrostrictive elements cause changes of the inner geometry of the electroacoustic transducer.

Regarding claim 3, Bernstein discloses a transducer comprising an electrode (12, in their multiple representation shown in multiple embodiments; capacitive material; col. 3 lines 42-58) and diaphragm (16, in their multiple representation shown in multiple embodiments; capacitive material; col. 3 lines 42-58).

Regarding claim 5, Bernstein discloses the transducer functioning as a microphone (col. 3 lines 62-64) comprising: a control loop (cavity 14 depicted in multiple embodiments) inherently determining a voltage supplied to the electrostrictive elements to compensate manufacturing tolerances and temperature effects having a negative effect on the spacing between the electrode and diaphragm, wherein a capacitance provides the parameter for the control loop.

Regarding claim 6, Bernstein discloses an electroacoustic transducer operating electrostatically and functioning as a microphone (col. 3 lines 62-64) comprising a sound receiver (16 in multiple representations shown in multiple embodiments) arranged between main source of sound and the microphone and determining a sound level, wherein values of the sound level measured by the sound receiver are employed for controlling a voltage supplied to the electrostrictive elements.

7. Claims 1 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Murayama (U.S. Patent No. 3,894,198).

Regarding claim 1, as best understood, Murayama discloses an electroacoustic transducer (figures 1-8) for an electroacoustic device, comprising: electrostrictive elements (1-

Art Unit: 2643

23) configured to be connected to a controllable power supply, wherein the dimensional changes of the electrostrictive elements cause changes of the inner geometry of the electroacoustic transducer.

Regarding claim 4, Murayama discloses an annular spacer (20, 21, 22).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bernstein (U.S. patent No. 5,146,435), in view of Murayama (U.S. Patent No. 3,894,198).

Regarding claims 2 and 8, Bernstein teaches that it is known to use piezoelectric elements (electrostrictive elements) in the construction of electroacoustic transducers (col. 1 lines 13-18), but the Bernstein reference does not specifically teach the plates used in his invention including piezoelectric materials. Murayama teaches using piezoelectric material when constructing an electrostrictive transducer for converting acoustically energy into electrical energy. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the electrostrictive elements of Bernstein with piezoelectric material, as taught by Murayama, for the reasons stated above.

Regarding claim 9, Bernstein does not teach an electroacoustic transducer comprising: a sound passage wherein the electrostrictive elements release or cover the sound passage as a

Art Unit: 2643

function of dimensional changes of the electrostrictive elements. Bernstein teaches that it is known to use piezoelectric elements (electrostrictive elements) in the construction of electroacoustic transducers (col. 1 lines 13-18) , but the Bernstein reference does not specifically teach the plates used in his invention include piezoelectric materials. Murayama teaches using piezoelectric material when constructing an electrostrictive transducer for converting acoustically energy into electrical energy. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to construct the electrostrictive elements of Bernstein with piezoelectric material, as taught by Murayama, for the reasons stated above. Furthermore, it is known, as stated by the application page 20 lines 17 through page 21 line 14, to use piezoelectric material with sufficient expansion coefficient to cause the element to cover a sound passage (13, Bernstein) for obtaining the desired frequency response. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a well-known expansion type piezoelectric material in the invention of Bernstein for achieving the desired frequency response.

Regarding claims 10-11, since the examiner believes that the sound passage (13) located in electrostrictive element (12) present in claim 9 supports the limitations: hollow spaces (claim 10) and channel (claim 11), these claims are rejected for the same reasons presented in the rejection of claim 9.

Art Unit: 2643

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phylesha L Dabney whose telephone number is 703-306-5415. The examiner can normally be reached on Mondays, Tuesdays, Wednesdays, Fridays 8:30-5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on 703-305-4708. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

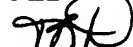
**Or faxed to:**

(703) 872-9314, for formal communications intended for entry and for informal or draft communications, please label "Proposed" or "Draft" when submitting an informal amendment.


(703) 306-0377, for customer service questions.

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

PLD



May 29, 2003



CURTIS KUNTZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600